FIGURE 1 – PRIOR ART

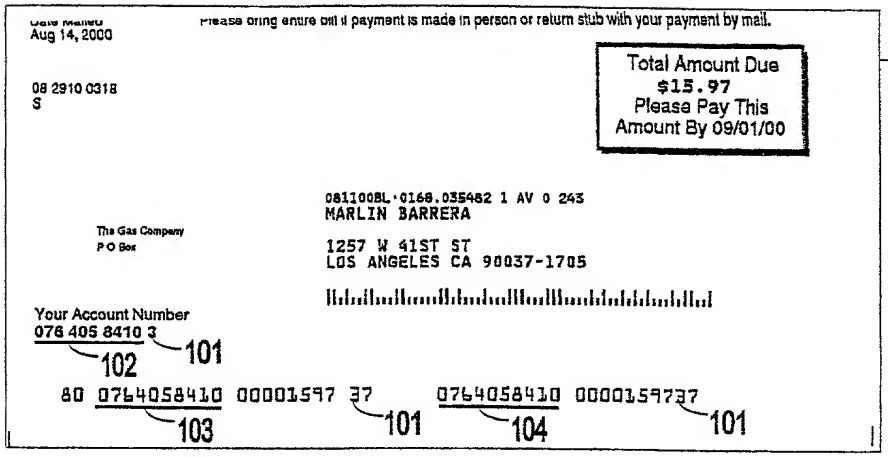


FIGURE 2 – PRIOR ART

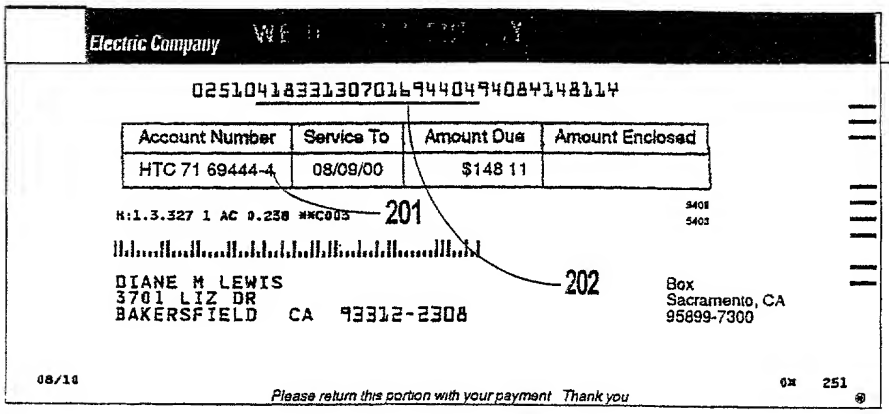


FIGURE 3 – PRIOR ART

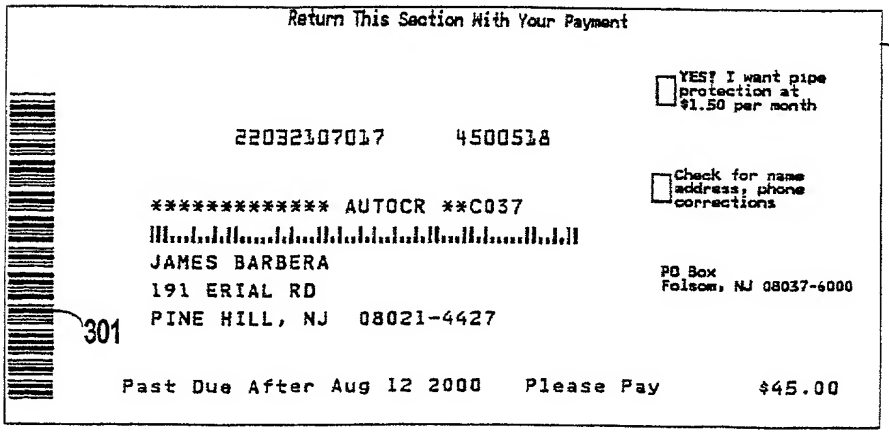


FIGURE 4 – PRIOR ART

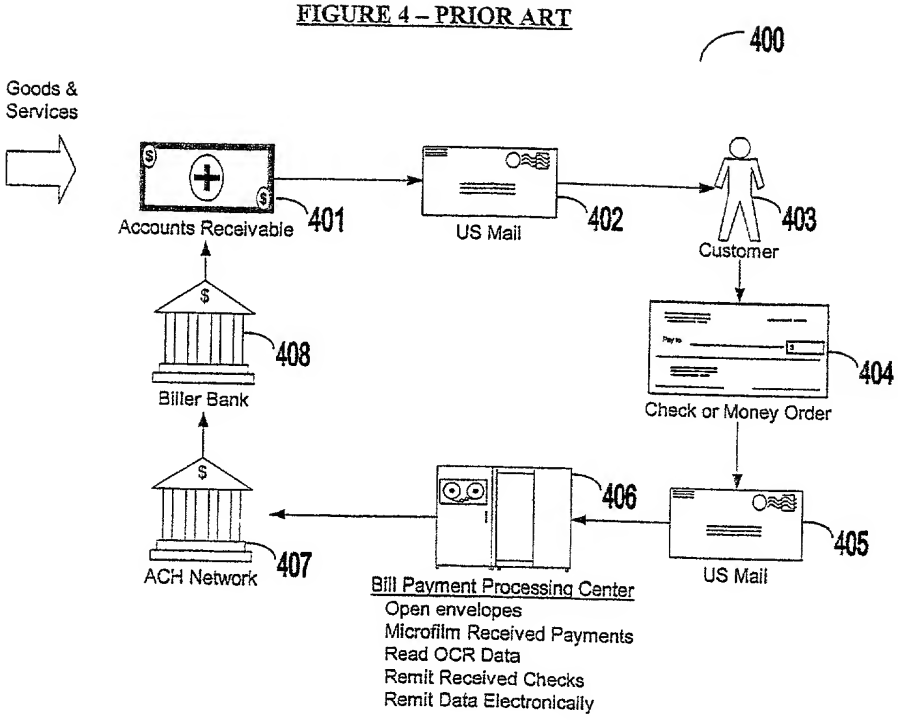


FIGURE 5

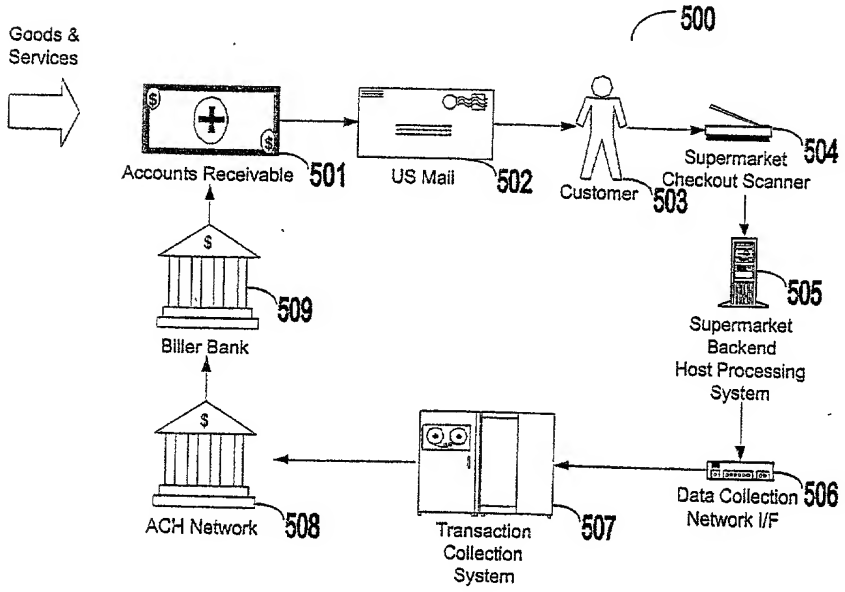


FIGURE 6

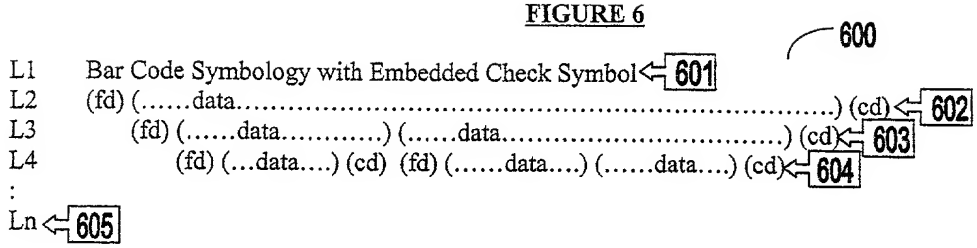


FIGURE 7

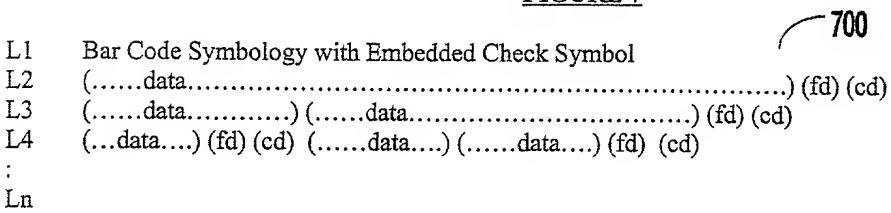


FIGURE 8

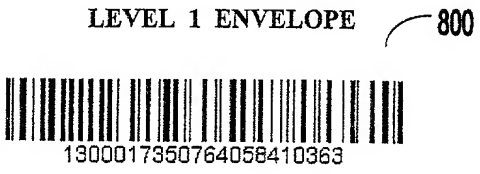


FIGURE 9

LEVEL 2 ENVELOPE

1300017350764058410363

900

Digit	Weight	Digit*Weight	Sum of Digits	Running Sum
1	1	1	1	1
3	3	9	9	10
0	1	0	0	10
0	3	0	0	10
0	1	0	0	10
1	3	3	3	13
7	1	7	7	20
3	3	9	9	29
5	1	5	5	34
0	3	0	0	34
7	1	7	7	41
6	3	18	9	50
4	1	4	4	54
0	3	0	0	54
5	1	5	5	59
8	3	24	6	65
4	1	4	4	69
1	3	3	3	72
0	1	0	0	72
3	3	9	9	81
6	1	6	6	**87**
3				

FIGURE 10

LEVEL 3 ENVELOPE

1000

Format Designator Value – 3 Example – 3 000173 5 0764058410 3 6

1 Digit Format Designator Value = 3 ⇦ 1001
6 Digit Biller Identification Number ⇦ 1002
1 Check Digit of preceding 6 digits using 371371 weights, MOD10 algorithm ⇦ 1003
Number of Components (1 Fixed Length (7), 1 Variable Length) (By Definition) ⇦ 1004
Customer Account Number with embedded (and known algorithm) check digit (3) ⇦ 1005
Calculated check digit of Level 3 data using 2121... weights, Split MOD10 algorithm (6) ⇦ 1006

FIGURE 11

LEVEL 3 ENVELOPE

1100

Format Designator Value – 4 Example – 4 000173 5 0764058410 3 4

1 Digit Format Designator Value = 4 ⇦ 1101
6 Digit Biller Identification Number ⇦ 1102
1 Check Digit of preceding 6 digits using 371371 weights, MOD10 algorithm ⇦ 1103
Number of Components (1 Fixed Length (7), 1 Variable Length) (By Definition) ⇦ 1104
Customer Account Number with added check digit to be discarded before presentment to biller (3) ⇦ 1105
Calculated check digit of Level 3 data using 2121... weights, Split MOD10 algorithm (4) ⇦ 1106

FIGURE 12

VALID ACCOUNT NUMBER

	Checkout Scanner	Retailer Host Processor	DCNI unit
1201	Read Bar Code →		
1202		Validate Bar Code →	
1203			← ACK, return Biller Name/Account #
1204	← Query Amount to be paid		
1205	Amount →		
1206		Bar Code + Amount →	
1207			Store Transaction Data
1208			← ACK, return Transaction ID
1209	← Print Biller Name, Account #, Transaction ID		

FIGURE 13

INVALID ACCOUNT NUMBER

	Checkout Scanner	Retailer Host Processor	DCNI unit
1301	Read Bar Code →		
1302		Validate Bar Code →	
1303			← NAK, return reason code
1304	← Reject Payment		

FIGURE 14

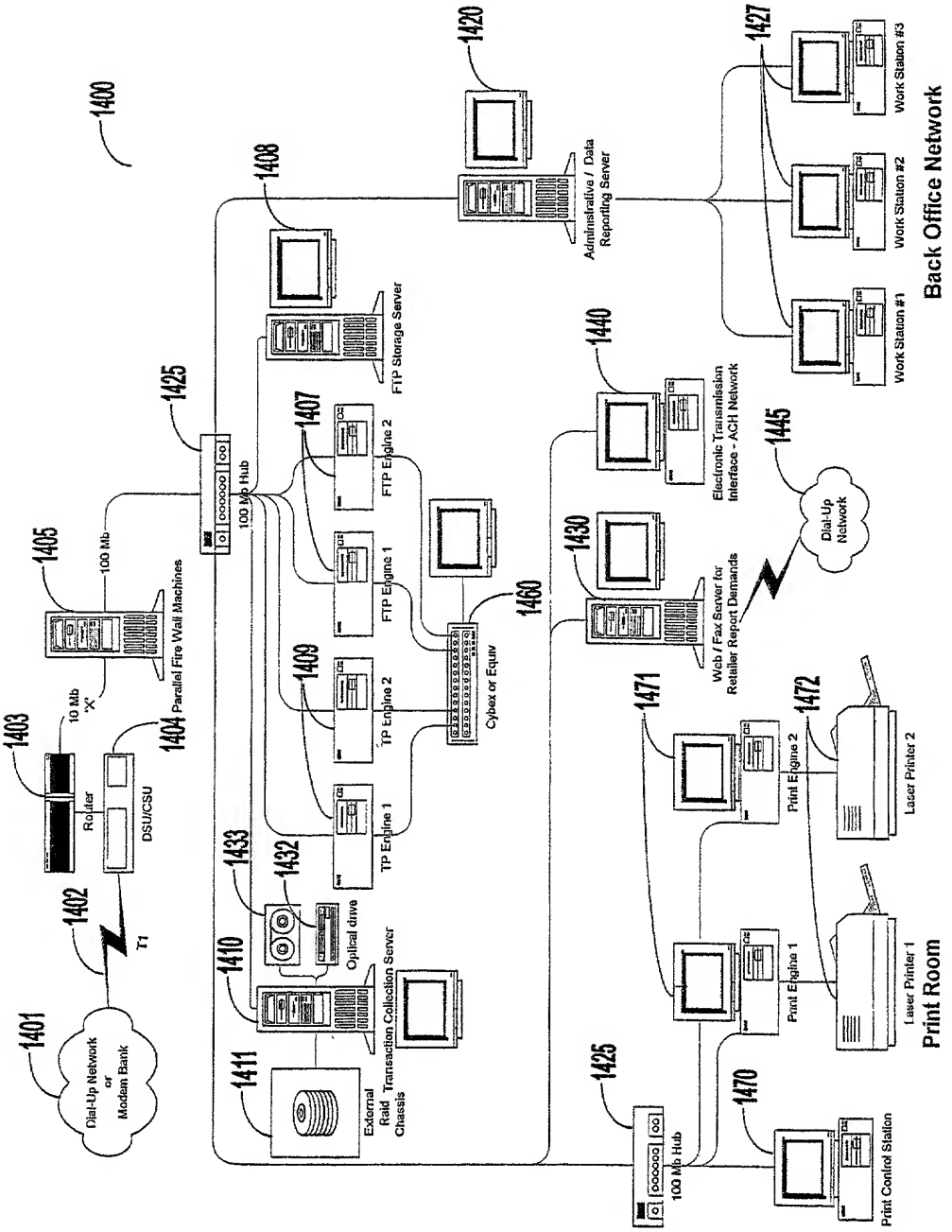

1400
1401
Dial-Up Network or Modem Bank
1402
T1
1403
Router
10 Mb
1404
DSU/CSU
1405
100 Mb
Parallel Fire Wall Machines
1407
FTP Engine 2
FTP Engine 1
1408
FTP Storage Server
1409
TP Engine 2
TP Engine 1
1410
Transaction Collection Server
1411
External Raid Chassis
1420
Administrative / Data Reporting Server
1425
100 Mb Hub
1427
Work Station #3
Work Station #2
Work Station #1
Back Office Network
1430
Web / Fax Server for Retailer Report Demands
1432
Optical drive
1433
1440
Electronic Transmission Interface - ACH Network
1445
Dial-Up Network
1460
Cybex or Equiv
1470
Print Control Station
1471
Print Engine 2
Print Engine 1
1472
Laser Printer 2
Laser Printer 1
Print Room

FIGURE 15

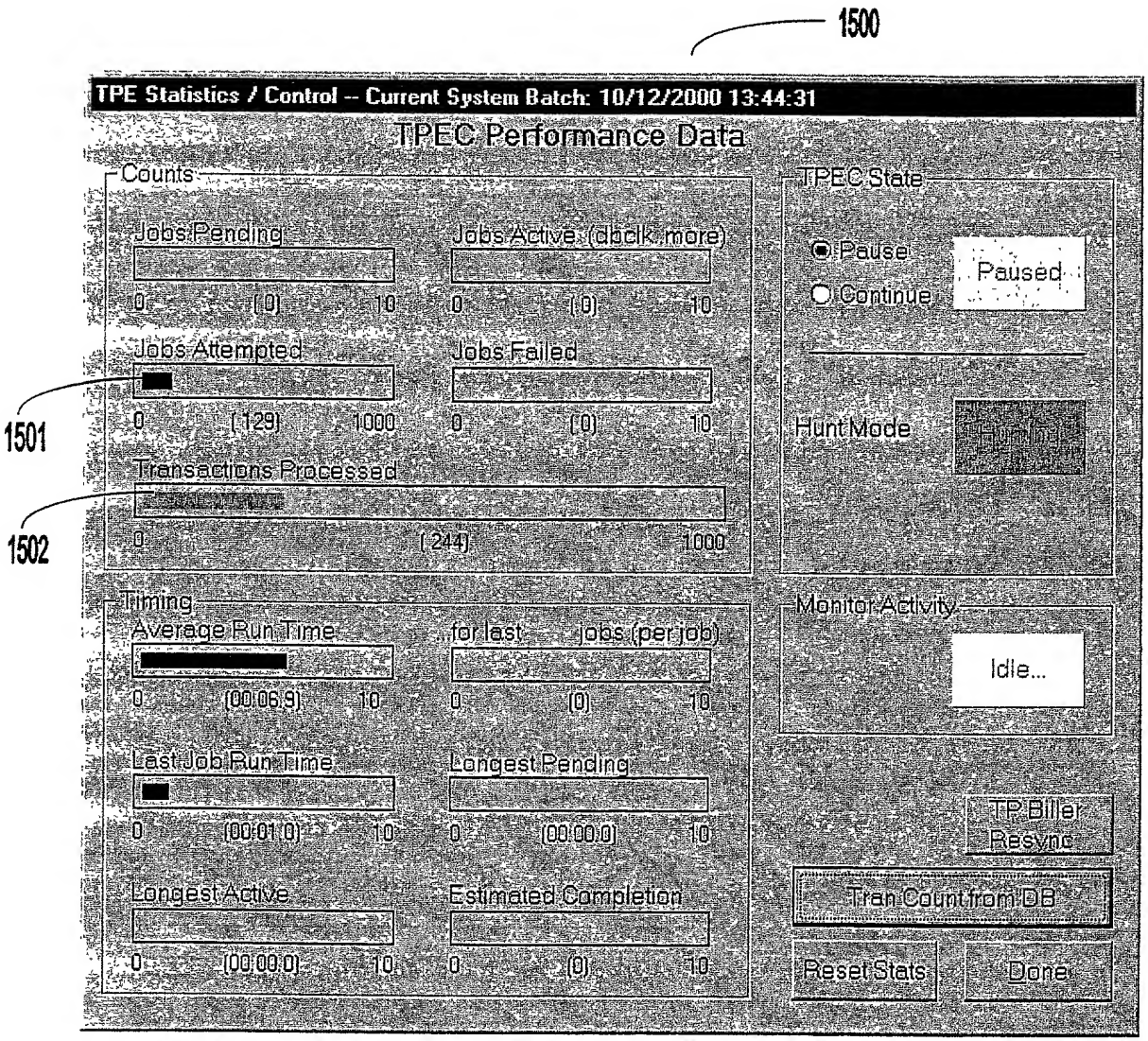
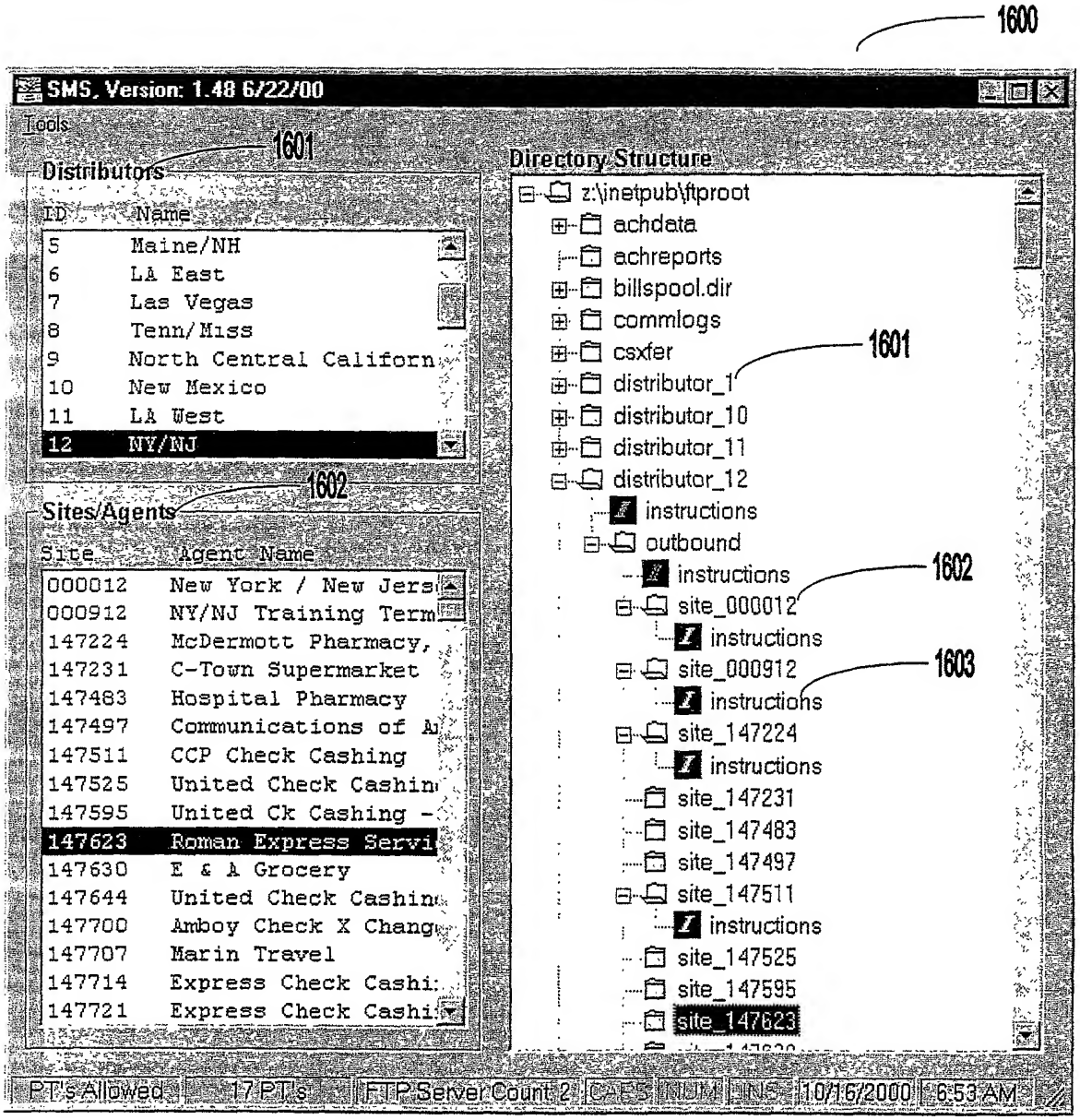

1500
TPE Statistics / Control -- Current System Batch: 10/12/2000 13:44:31
TPEC Performance Data
Counts
Jobs Pending
Jobs Active (click more)
Jobs Attempted
Jobs Failed
1501
Transactions Processed
1502
Timing
Average Run Time
for last
jobs (per job)
Last Job Run Time
Longest Pending
Longest Active
Estimated Completion
TPEC State
Pause
Continue
Paused
Hunt Mode
Monitor Activity
Idle...
TP Bille Resync
Tran Count from DB
Reset Stats
Done

FIGURE 16


1600
SMS, Version: 1.48 6/22/00
Tools
Distributors
1601
ID
Name
5 Maine/NH
6 LA East
7 Las Vegas
8 Tenn/Miss
9 North Central Californ
10 New Mexico
11 LA West
12 NY/NJ
Sites/Agents
1602
Site
Agent Name
000012 New York / New Jers
000912 NY/NJ Training Term
147224 McDermott Pharmacy,
147231 C-Town Supermarket
147483 Hospital Pharmacy
147497 Communications of A
147511 CCP Check Cashing
147525 United Check Cashin
147595 United Ck Cashing -
147623 Roman Express Servi
147630 E & A Grocery
147644 United Check Cashin
147700 Amboy Check X Chang
147707 Marin Travel
147714 Express Check Cashi
147721 Express Check Cashi
Directory Structure
z:\inetpub\ftproot
achdata
achreports
billspool.dir
commlogs
csxfer
distributor_1
1601
distributor_10
distributor_11
distributor_12
instructions
outbound
instructions
1602
site_000012
instructions
site_000912
1603
instructions
site_147224
instructions
site_147231
site_147483
site_147497
site_147511
instructions
site_147525
site_147595
site_147623
PT's Allowed
17 PT's
FTP Server Count 2
CAPS
NUM
INS
10/16/2000
6:53 AM

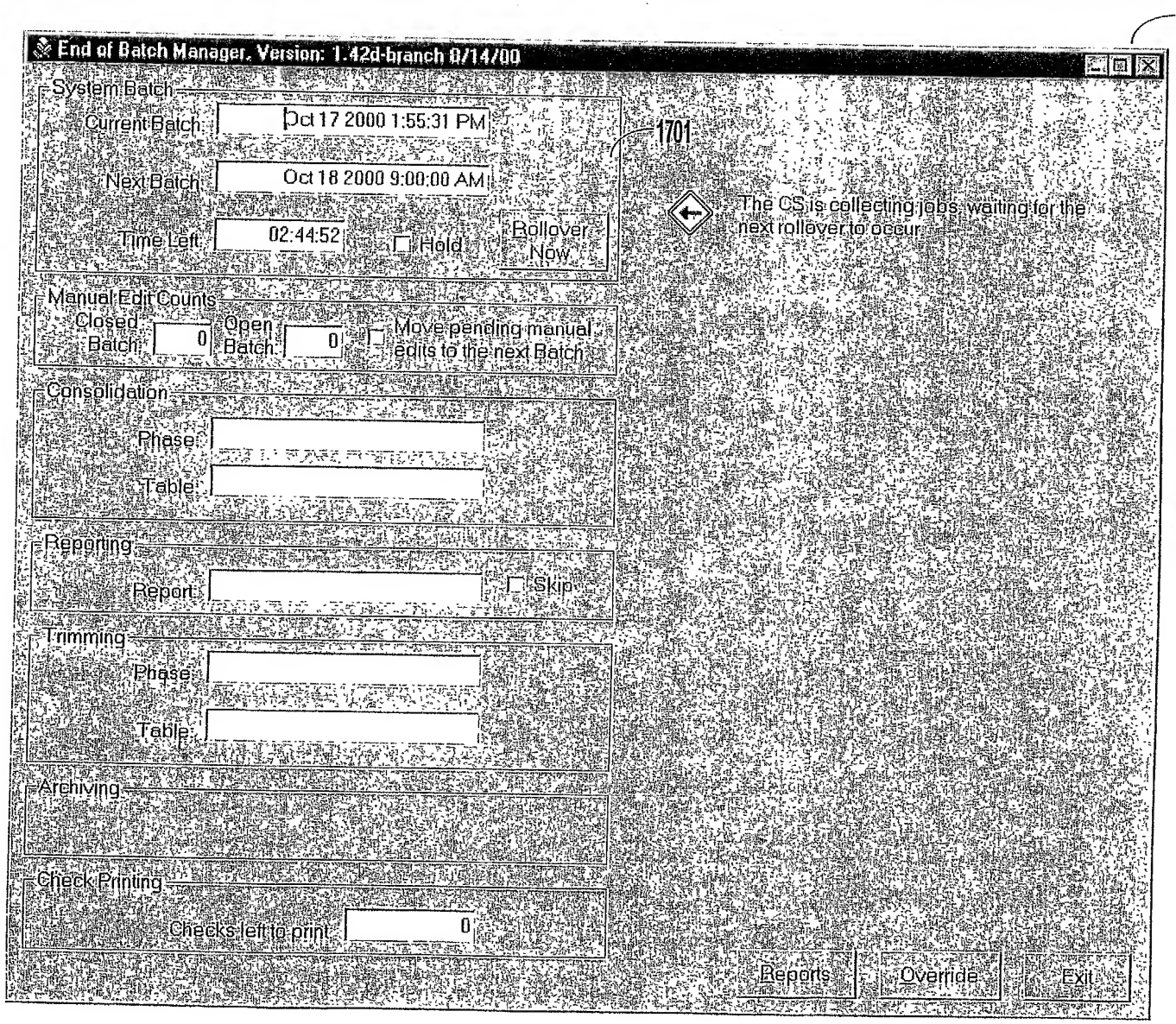

1700
End of Batch Manager, Version: 1.42d-branch 8/14/00
System Batch
Current Batch:
Oct 17 2000 1:55:31 PM
1701
Next Batch:
Oct 18 2000 9:00:00 AM
Time Left:
02:44:52
Hold
Rollover Now
The CS is collecting jobs, waiting for the next rollover to occur.
Manual Edit Counts
Closed Batch:
0
Open Batch:
0
Move pending manual edits to the next Batch
Consolidation
Phase:
Table:
Reporting
Report:
Skip
Trimming
Phase:
Table:
Archiving
Check Printing
Checks left to print:
0
Reports
Override
Exit

FIGURE 17

Confidential 1800200T

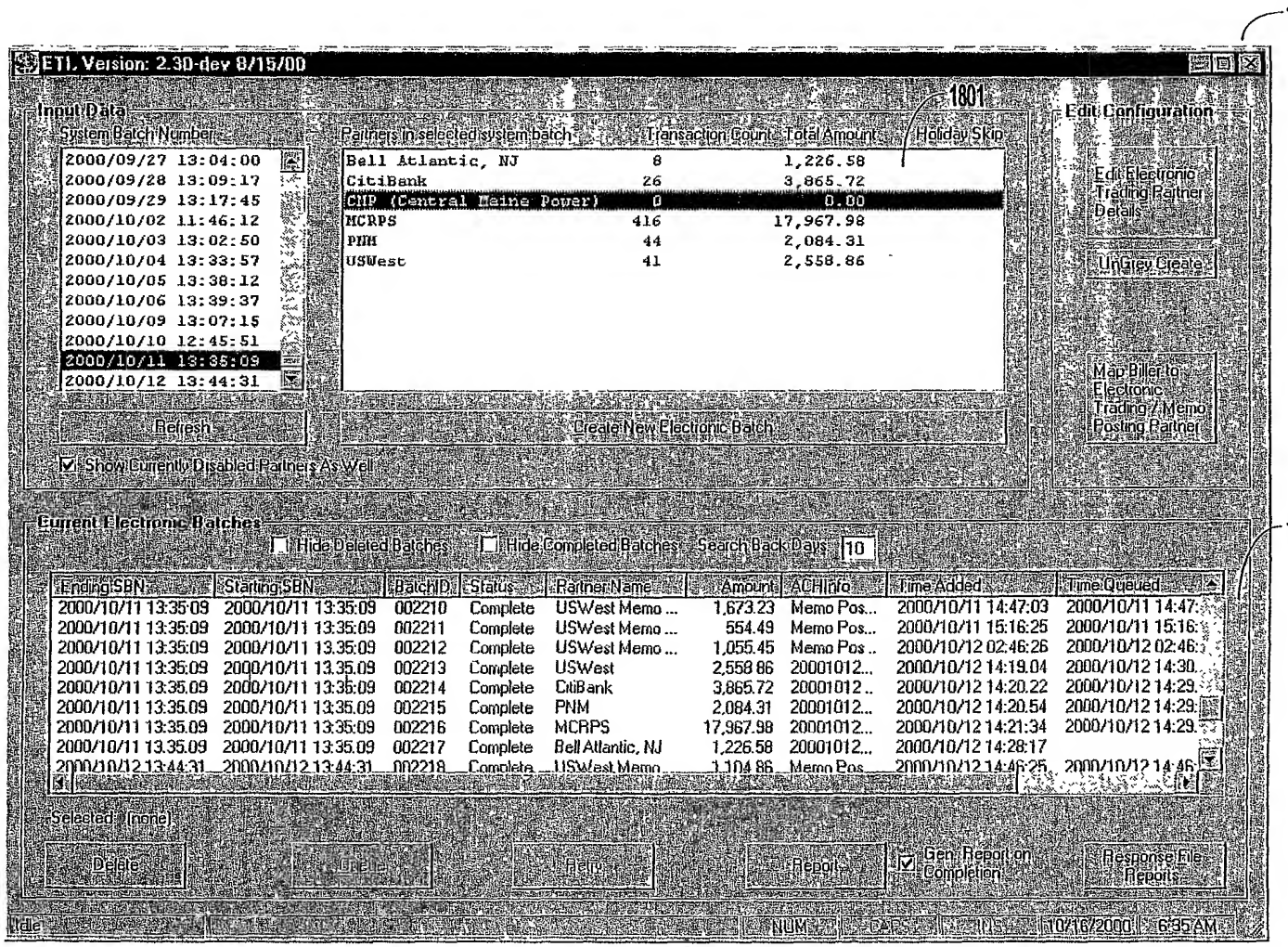


FIGURE 18

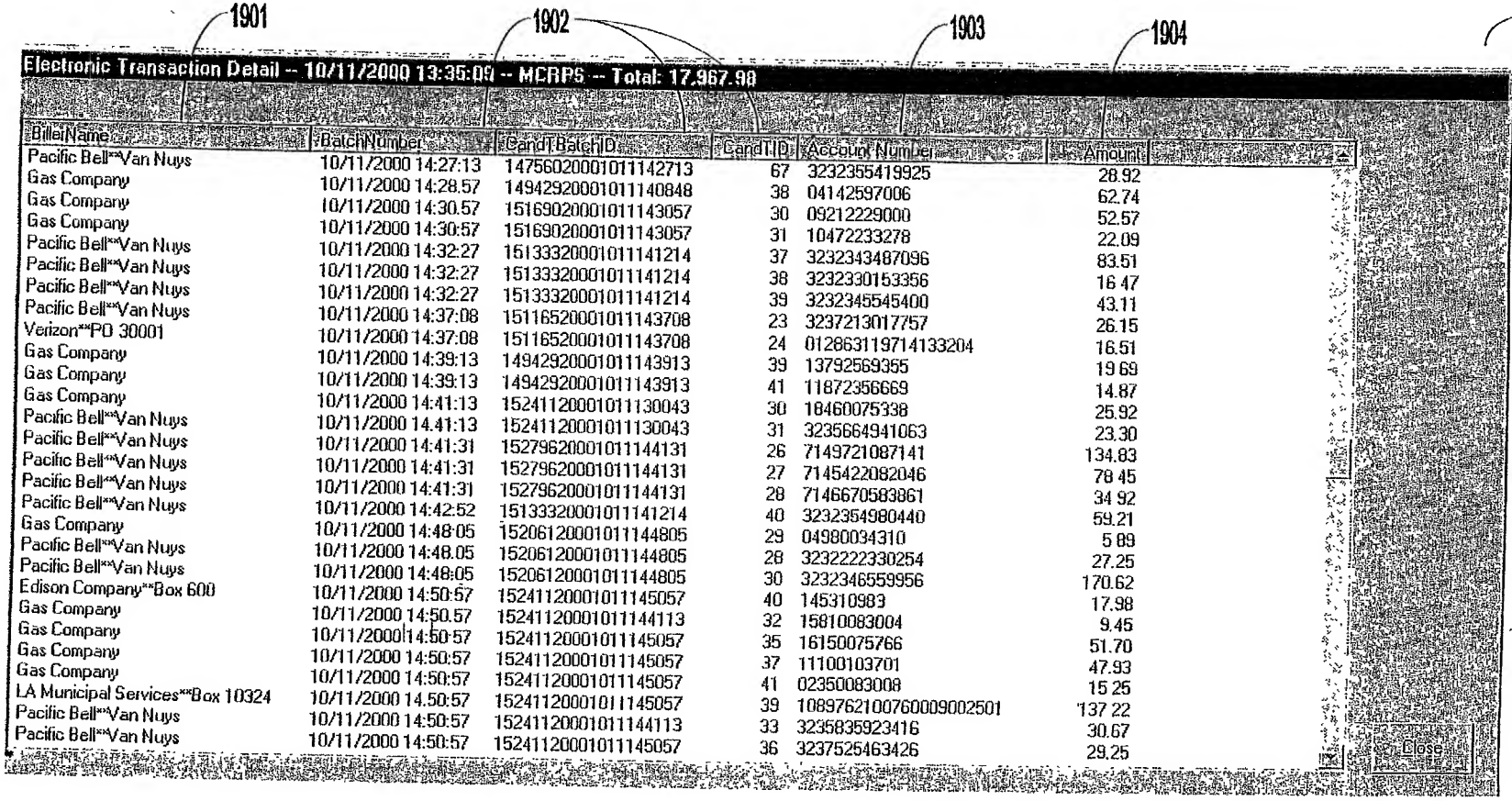

1901
1902
1903
1904
1900
Electronic Transaction Detail -- 10/11/2000 13:35:09 -- MCRPS -- Total: 17,967.98
BillerName
BatchNumber
CandTBatchID
CandTID
AccountNumber
Amount
Pacific Bell**Van Nuys 10/11/2000 14:27:13 14756020001011142713 67 3232355419925 28.92
Gas Company 10/11/2000 14:28:57 1494292000101114084 8 38 04142597006 62.74
Gas Company 10/11/2000 14:30:57 1516902000101114305 7 30 09212229000 52.57
Gas Company 10/11/2000 14:30:57 1516902000101114305 7 31 10472233278 22.09
Pacific Bell**Van Nuys 10/11/2000 14:32:27 1513332000101114121 4 37 3232343487096 83.51
Pacific Bell**Van Nuys 10/11/2000 14:32:27 1513332000101114121 4 38 3232330153356 16.47
Pacific Bell**Van Nuys 10/11/2000 14:32:27 1513332000101114121 4 39 3232345545400 43.11
Pacific Bell**Van Nuys 10/11/2000 14:37:08 1511652000101114370 8 23 3237213017757 26.15
Verizon**PO 30001 10/11/2000 14:37:08 1511652000101114370 8 24 012863119714133204 16.51
Gas Company 10/11/2000 14:39:13 1494292000101114391 3 39 13792569355 19.69
Gas Company 10/11/2000 14:39:13 1494292000101114391 3 41 11872356669 14.87
Gas Company 10/11/2000 14:41:13 1524112000101113004 3 30 18460075338 25.92
Pacific Bell**Van Nuys 10/11/2000 14:41:13 1524112000101113004 3 31 3235664941063 23.30
Pacific Bell**Van Nuys 10/11/2000 14:41:31 1527962000101114413 1 26 7149721087141 134.83
Pacific Bell**Van Nuys 10/11/2000 14:41:31 1527962000101114413 1 27 7145422082046 78.45
Pacific Bell**Van Nuys 10/11/2000 14:41:31 1527962000101114413 1 28 7146670583861 34.92
Pacific Bell**Van Nuys 10/11/2000 14:42:52 1513332000101114121 4 40 3232354980440 59.21
Gas Company 10/11/2000 14:48:05 1520612000101114480 5 29 04980034310 5.89
Pacific Bell**Van Nuys 10/11/2000 14:48:05 1520612000101114480 5 28 3232222330254 27.25
Pacific Bell**Van Nuys 10/11/2000 14:48:05 1520612000101114480 5 30 3232346559956 170.62
Edison Company**Box 600 10/11/2000 14:50:57 1524112000101114505 7 40 145310983 17.98
Gas Company 10/11/2000 14:50:57 1524112000101114411 3 32 15810083004 9.45
Gas Company 10/11/2000 14:50:57 1524112000101114505 7 35 16150075766 51.70
Gas Company 10/11/2000 14:50:57 1524112000101114505 7 37 11100103701 47.93
Gas Company 10/11/2000 14:50:57 1524112000101114505 7 41 02350083008 15.25
LA Municipal Services**Box 10324 10/11/2000 14:50:57 1524112000101114505 7 39 1089762100760009002501 137.22
Pacific Bell**Van Nuys 10/11/2000 14:50:57 1524112000101114411 3 33 3235835923416 30.67
Pacific Bell**Van Nuys 10/11/2000 14:50:57 1524112000101114505 7 36 3237525463426 29.25
Close

FIGURE 19

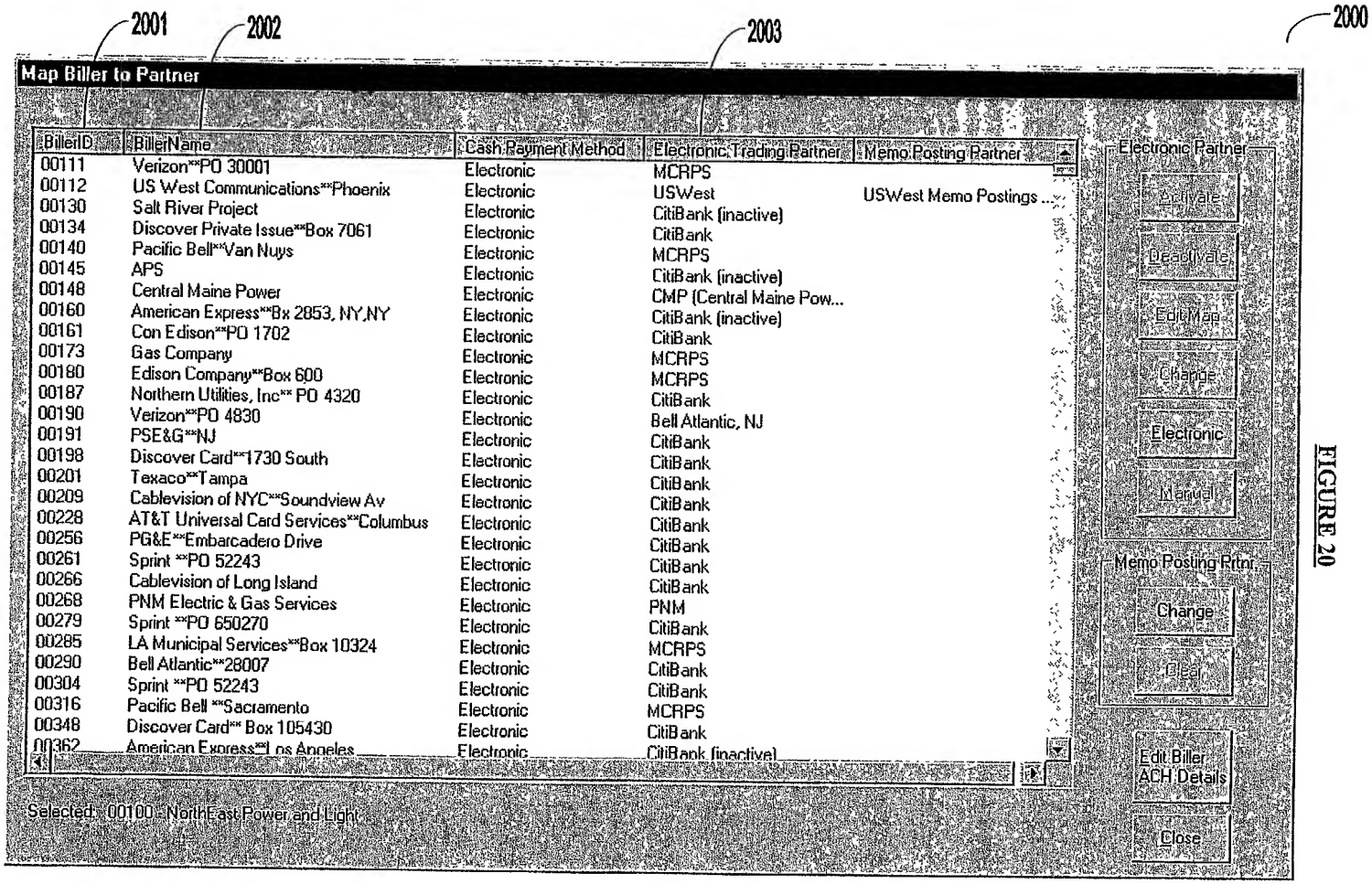

2001
2002
2003
2000
Map Biller to Partner
BillerID
BillerName
Cash Payment Method
Electronic Trading Partner
Memo Posting Partner
00111 Verizon**PO 30001 Electronic MCRPS
00112 US West Communications**Phoenix Electronic USWest USWest Memo Postings ...
00130 Salt River Project Electronic CitiBank (inactive)
00134 Discover Private Issue**Box 7061 Electronic CitiBank
00140 Pacific Bell**Van Nuys Electronic MCRPS
00145 APS Electronic CitiBank (inactive)
00148 Central Maine Power Electronic CMP (Central Maine Pow...
00160 American Express**Bx 2853, NY,NY Electronic CitiBank (inactive)
00161 Con Edison**PO 1702 Electronic CitiBank
00173 Gas Company Electronic MCRPS
00180 Edison Company**Box 600 Electronic MCRPS
00187 Northern Utilities, Inc** PO 4320 Electronic CitiBank
00190 Verizon**PO 4830 Electronic Bell Atlantic, NJ
00191 PSE&G**NJ Electronic CitiBank
00198 Discover Card**1730 South Electronic CitiBank
00201 Texaco**Tampa Electronic CitiBank
00209 Cablevision of NYC**Soundview Av Electronic CitiBank
00228 AT&T Universal Card Services**Columbus Electronic CitiBank
00256 PG&E**Embarcadero Drive Electronic CitiBank
00261 Sprint **PO 52243 Electronic CitiBank
00266 Cablevision of Long Island Electronic CitiBank
00268 PNM Electric & Gas Services Electronic PNM
00279 Sprint **PO 650270 Electronic CitiBank
00285 LA Municipal Services**Box 10324 Electronic MCRPS
00290 Bell Atlantic**28007 Electronic CitiBank
00304 Sprint **PO 52243 Electronic CitiBank
00316 Pacific Bell **Sacramento Electronic MCRPS
00348 Discover Card** Box 105430 Electronic CitiBank
00362 American Express**Los Angeles Electronic CitiBank (inactive)
Selected: 00100 - NorthEast Power and Light
Electronic Partner
Activate
Deactivate
Edit Map
Change
Electronic
Manual
Memo Posting Ptnr
Change
Clear
Edit Biller ACH Details
Close

FIGURE 20

Patent Application

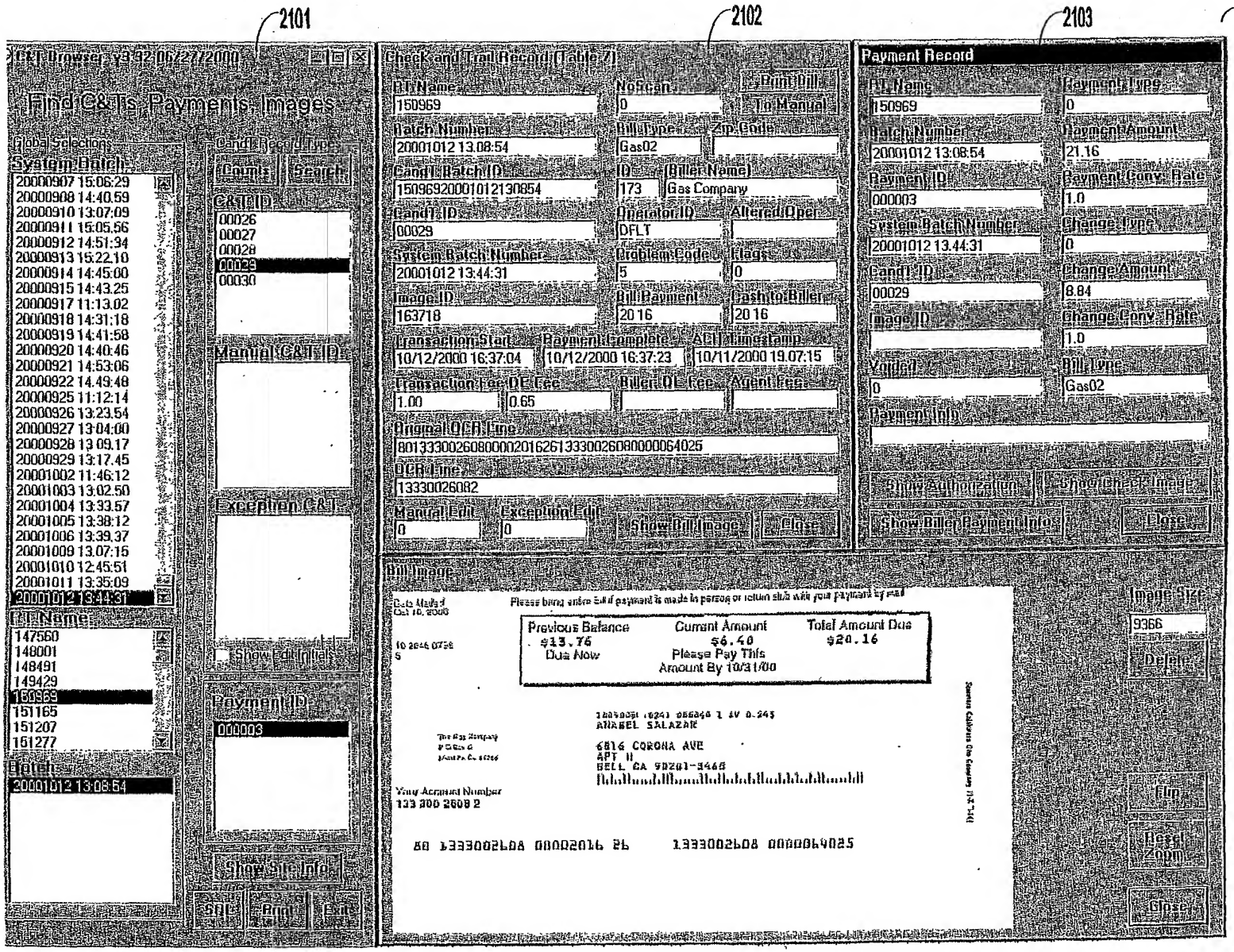


FIGURE 21

FIGURE 22

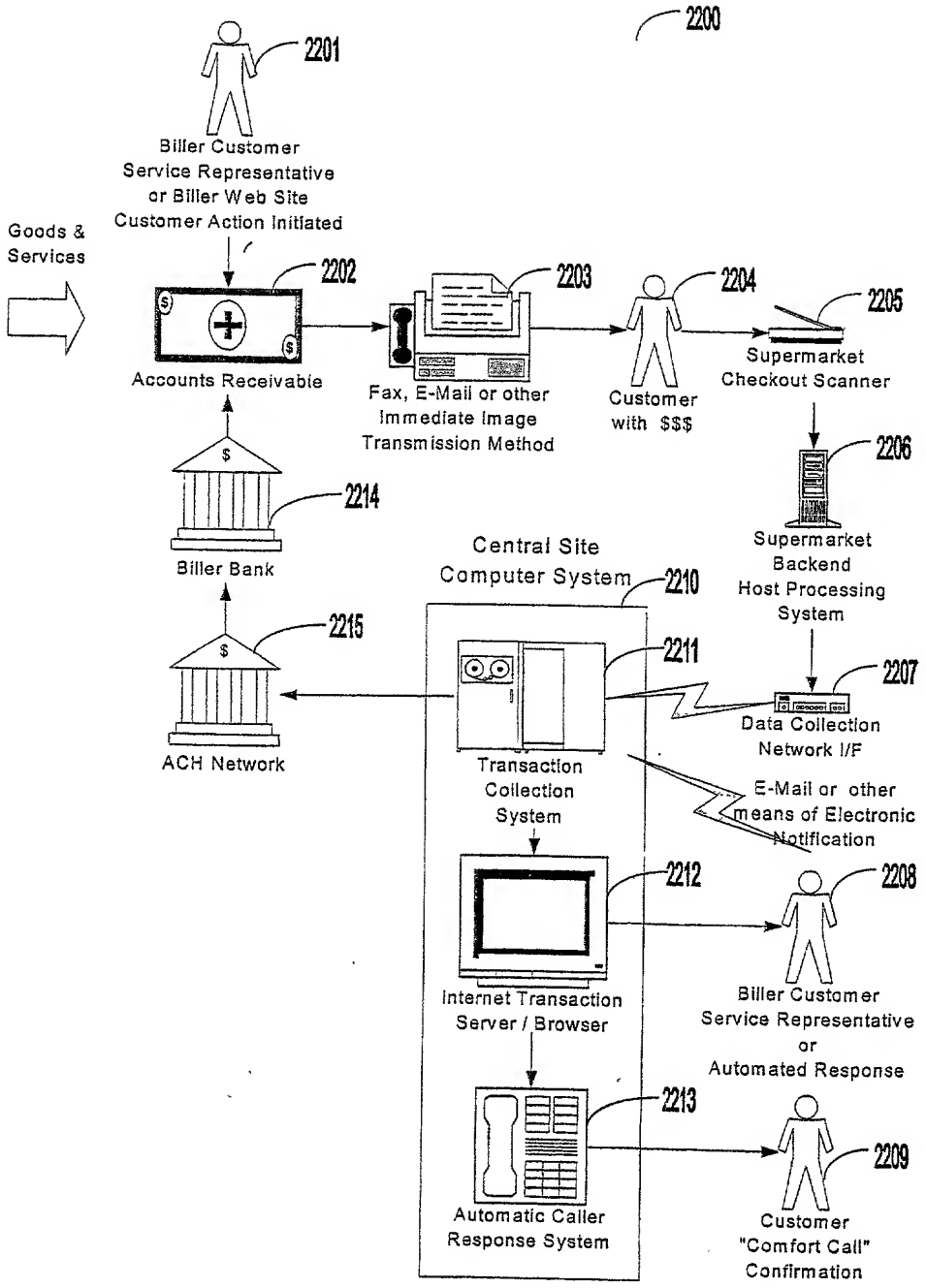

2200
2201
Biller Customer Service Representative or Biller Web Site Customer Action Initiated
Goods & Services
2202
Accounts Receivable
2203
Fax, E-Mail or other Immediate Image Transmission Method
2204
Customer with $$$
2205
Supermarket Checkout Scanner
2206
Supermarket Backend Host Processing System
2214
Biller Bank
Central Site Computer System
2210
2215
ACH Network
2211
2207
Data Collection Network I/F
Transaction Collection System
E-Mail or other means of Electronic Notification
2212
2208
Internet Transaction Server / Browser
Biller Customer Service Representative or Automated Response
2213
2209
Automatic Caller Response System
Customer "Comfort Call" Confirmation

FIGURE 23

2300

Format Designator Value – 5 Example – 5 50 5 51066065 5 0766936692 4 4

1 Digit Format Designator Value = 5 ⇦ 2301

Number of Components (2 Fixed Length (3,9), 1 Variable Length) (By Definition) ⇦ 2302

2 Digit Payment Network Identification Number ⇦ 2303

1 Check Digit of preceding 2 digits using 37 weights, MOD10 algorithm ⇦ 2304

8 Digit ABA Number (51066065) ⇦ 2305

1 Check Digit of preceding 8 digits using 37137137 weights, MOD10 algorithm ⇦ 2306

Entire Customer Bank Account Number (5106606550766936692) using 1212... weights, Split MOD10 with added check digit to be discarded before presentment to the destination payment network (4) ⇦ 2307

Calculated check digit of Level 3 envelope using 2121... weights, Split MOD10 algorithm (4) ⇦ 2308

FIGURE 24

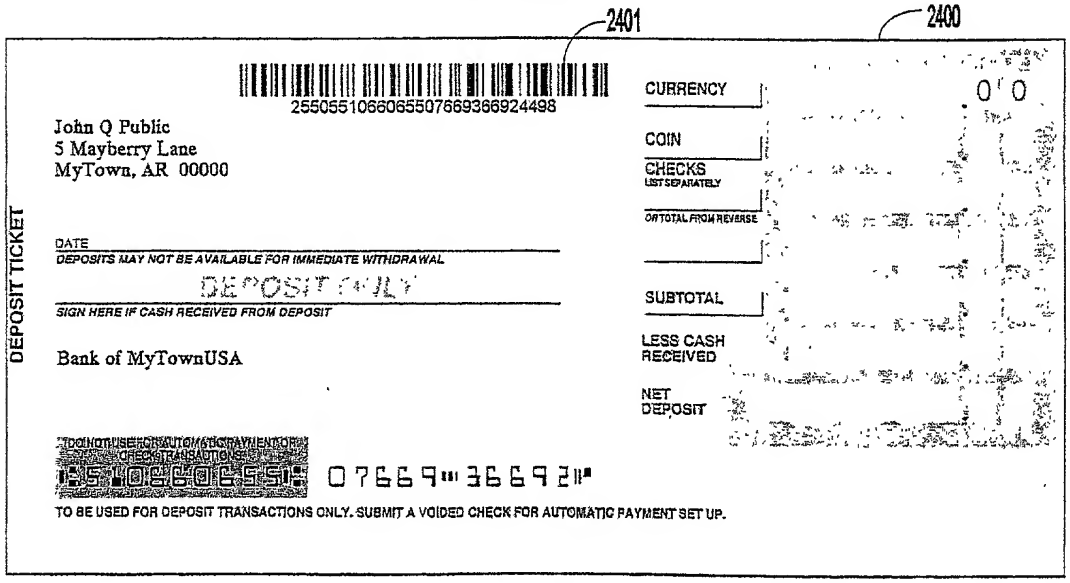


FIGURE 25

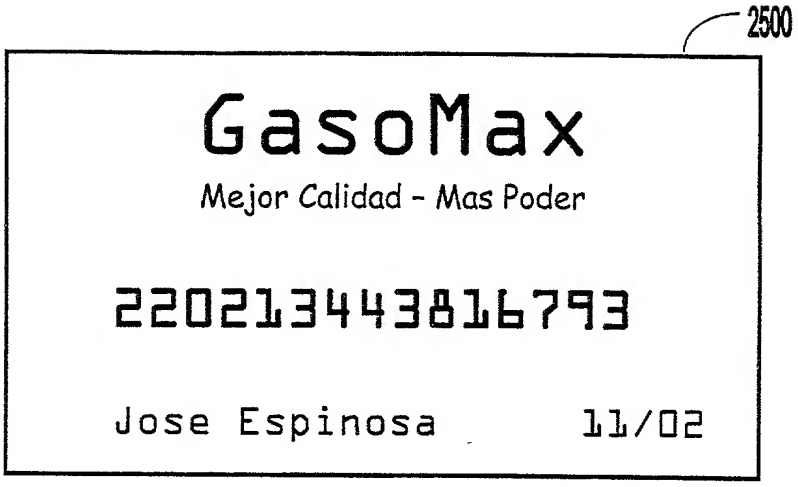


FIGURE 26